Journal of Materials Processing Technology, 33 (1992) 521–523
Elsevier

Contents Volume 33

Vol. 33, Nos. 1&2, August 1992

Special Issue: Selected Papers on Metal Forming from the Engineering Research Center for Net Shape Manufacturing, the Ohio State University, Columbus, OH 43210, USA

Preface vii

Recent developments in tooling, machines and research in cold forming of complex parts
J.A. Pale (Detroit, MI, USA), R. Shivpuri and T. Altan (Columbus, OH, USA) 1

Application of the 2D finite element method to simulation of various forming processes
M. Knoerr, J. Lee and T. Altan (Columbus, OH, USA) 31

Computer-aided part and processing-sequence design in cold forging
H. Kim, T. Altan (Columbus, OH, USA) and K. Sevenler (Webster, NY, USA) 57

Numerical and physical modelling of cold forging of bevel gears
M. Meidert, M. Knoerr, K. Westphal and T. Altan (Columbus, OH, USA) 75

Evaluation of lubrication and friction in cold forging using a double backward-extrusion process
A. Buschhausen (Aachen, Germany), K. Weinmann (Houghton, MI, USA), J.Y. Lee and T. Altan (Columbus, OH, USA) 95

A method for evaluating friction using a backward extrusion-type forging
G. Shen, A. Vedhanayagam, E. Kropp and T. Altan (Columbus, OH, USA) 109

A technique to compensate for temperature history effects in the simulation of non-isothermal forging processes
G. Shen (Columbus, OH, USA), S.L. Semiatin (Dayton, OH, USA), E. Kropp and T. Altan (Columbus, OH, USA) 125

Finite-slab element investigation of square-to-round multi-pass shape rolling
W. Shin, S.M. Lee, R. Shivpuri and T. Altan (Columbus, OH, USA) 141

Investigation of metal flow and temperatures by FEM in the extrusion of Ti–6A1–4V tubes
T. Udagawa (Kawasaki, Japan), E. Kropp and T. Altan (Columbus, OH, USA) 155

On the acceptable blank-holder force range in the deep-drawing process
S. Yossifon (Beer-Sheva, Israel), K. Sweeney, M. Ahmetoglu and T. Altan (Columbus, OH, USA) 175

Improvement of part quality in stamping by controlling blank-holder force and pressure
M.A. Ahmetoglu, T. Altan and G.L. Kinzel (Columbus, OH, USA) 195

Vol. 33, No. 3, September 1992

Bending of amorphous alloys
S. Suto, K. Matsuno, T. Sano (Tsukuba, Japan) and K. Matsui (Isehara, Japan) 215

Experimental determination of the dynamic shear stress in metal cutting
R.M.D. Mesquita and M.J.M. Barata Marques (Lisboa, Portugal) 229

Elsevier Science Publishers B.V.

Effect of heat input on the HAZ properties of two duplex stainless steels
S. Jana (Singapore) 247
A comparison of some deformation models in axisymmetric extrusion
S.B. Altan, N. Antar and E. Gultekin (Istanbul, Turkey) 263
A study of the state of stress during cold strip-rolling
Z. Malinowski (Kraków, Poland) and J.G. Lenard (Ontario, Canada) 273
Analysis of center-shifted backward extrusion of eccentric tubes using round punches
D.Y. Yang (Taejon, South Korea), Y.U. Kim (Seoul, South Korea) and C.M. Lee (Changwon, South Korea) 289
Application of an image processing technique in strain measurement in sheet metal forming
Zheng Tan, L. Melin and C. Magnusson (Luleå, Sweden) 299

Short Communication
A method of measurement for determination of relative density in the axisymmetric forming of sintered porous material
J.H. Moon and D.Y. Yang (Taejon, South Korea) 311

Diary Supplement 319

Vol. 33, No. 4, September 1992

Special Issue: Selected Papers of the 7th Conference of the Irish Manufacturing Committee on Advanced Manufacturing Technology, Dublin, Ireland, August 29–31, 1990

Preface iii

Contents iv

Charles Parsons – Manufacturer
W.G. Scaife (Dublin, Ireland) 323
Design study of the geometry of a punching/blanking tool
U.P. Singh (Jordanstown, Ireland), A.H. Streppel and H.J.J. Kals (Enschede, Netherlands) 331
The modeling of changing boundary conditions during an elasto-plastic finite-element analysis of a heading process
J.M. Monaghan and R. Sheehan (Dublin, Ireland) 347
Feasibility of manufacturing polymer-coated composite wire ropes using plasto-hydrodynamic technique
M.A. Tunio and M.S.J. Hashmi (Dublin, Ireland) 367
Die-less wire drawing using borosiloxane as a pressure medium
G.R. Symmons (Sheffield, UK) and Zhang Ming (Chengdu, China) 375
Simulation of a microcomputer-controlled robotic hand for wire electro-discharge machining applications
M.T. Bhatti and M.S.J. Hashmi (Dublin, Ireland) 383
The production of axi-symmetric pattern-moulds on a numerically-controlled milling machine
I.S. Gibson (Galway, Ireland) 397
The effect of the properties of the material on the plane-strain deformation of rectangular billets between grooved and flat platens
W. Hu and M.S.J. Hashmi (Dublin, Ireland) 419

High speed milling of nickel-based superalloys
E.O. Ezugwu and I.R. Pashby (Coventry, UK) 429
The surface-finish characteristics of composite components
W. Wenger, G.R. Dickson, R. McIlhagger and P.P. Miller (Jordanstown, UK) 439
The turning of an Al/SiC metal-matrix composite
L.A. Looney, J.M. Monaghan, P. O'Reilly and D.M.R. Taplin (Dublin, Ireland) 453
The drilling of an Al/SiC metal-matrix composite
J.M. Monaghan and P. O'Reilly (Dublin, Ireland) 469
Novel materials for the semiconductor industry, deposited using a rapid thermal chemical vapour deposition system
J.H. Montgomery, F.H. Ruddell, D.W. McNeill, B.M. Armstrong and H.S. Gamble (Belfast, Ireland) 481
The manufacture of silicon power devices using welding techniques
C. Parkes, E. Ling, S.J.N. Mitchell, B.M. Armstrong and H.S. Gamble (Belfast, Ireland) 493
An expert system for grinding process optimisation
G.J. Trmal (Bristol, UK), C.B. Zhu (Beijing, China) and P.S. Midha (Bristol, UK) 507

Acknowledgement of Referees 519
Author Index Volume 33 520
Contents Volume 33 521